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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/610,097	06/30/2000	Kenneth C. Budka	BUDKA 5-1-1	3114

7590 04/10/2003

William H Murray Esquire
Duane Morris & Heckscher LLP
4200 One Liberty Place
Philadelphia, PA 19103-7396

EXAMINER

MILLER, BRANDON J

ART UNIT	PAPER NUMBER
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2683

DATE MAILED: 04/10/2003

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/610,097

Applicant(s)

BUDKA ET AL.

Examiner

Brandon J Miller

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-6 are rejected under 35 U.S.C. 102(a) as being anticipated by Honkasalo.

Regarding claim 1 Honkasalo teaches a system having a base station transmitter for transmitting data blocks to one or more mobile station over a radio link (see col. 4, lines 26-30). Honkasalo teaches determining a transmit power level at which to transmit a current block (see col. 4, lines 26-41). Honkasalo teaches receiving a quality measurement from a mobile station indicating an average radio link quality over a previous group of blocks (see col. 7, lines 60-67, wherein not all of the previous group of blocks were necessarily transmitted at the same transmit power level (see abstract and col. 8, lines 44-67). Honkasalo teaches determining a transmit power attenuation level for a current block based on a quality measurement (see abstract, col. 8, lines 25-67 and col. 9, lines 1-5). Honkasalo teaches subtracting the transmit power attenuation level from an initial transmit power level to determine the transmit power level for a current block (see abstract, col. 8, lines 25-67, col. 9, lines 1-5 and col. 12, lines 36-50).

Regarding claim 2 Honkasalo teaches a system that is a general packet radio serve (GPRS) system (see col. 4, lines 35-40).

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Regarding claim 3 Honkasalo teaches different power control modes, and an initial transmit power level that is a maximum transmit power level (see abstract, col. 3, lines 24-36, col. 4, lines 64-67 and col. 5, lines 15-18).

Regarding claim 4 Honkasalo teaches a maximum transmit power level that is a broadcast common control channel transmit power level minus a power level assigned to a mobile station during establishment of a downlink temporary block flow (see abstract, col. 5, lines 56-63 and col. 6, lines 8-15).

Regarding claim 5 Honkasalo teaches a current block to be transmitted on a timeslot and a quality measurement that indicates the average radio link quality over a previous group of blocks also transmitted on a timeslot (see col. 4, lines 27-35, col. 7, lines 48-67).

Regarding claim 6 Honkasalo teaches transmitting a current block at a transmit power level (see abstract and col. 12, lines 36-50).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Honkasalo.

Regarding claim 7 Honkasalo teaches a device as recited in claim 1 except for during transmission of a last block of a previous group of blocks, polling a mobile station for a quality measurement by setting a poll bit in a last block. Honkasalo does teach during transmission of a group of blocks, polling a mobile station for a quality measurement (see col. 4, lines 58-63).

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Even though Honkasalo does not specifically polling a mobile station for a quality measurement by setting a poll bit in a last block it would have been obvious to one skilled in the art at the time the invention was made to make the Honkasalo adapt to include during transmission of a last block of a previous group of blocks, polling a mobile station for a quality measurement by setting a poll bit in a last block because this would be advantageous when the average length of a data block is long enough to cause considerable delay.

Claims 8-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honkasalo in view of Laakso and Andersson.

Regarding claim 8 Honkasalo teaches a current block to be transmitted on a timeslot and a quality measurement that indicates an average radio link quality over the previous group of blocks transmitted (see col. 4, lines 27-35, col. 7, lines 48-67). Honkasalo teaches determining a radio link attenuation level for a data block (see col. 6, lines 52-58). Honkasalo teaches achieving an acceptable error rate (see col. 9, lines 31-34 and col. 11, lines 35-42). Honkasalo teaches determining the transmit power attenuation level for a current block (see col. 6, lines 48-62 and col. 8, lines 25-67). Honkasalo teaches a radio link attenuation level that is the downlink attenuation that the mobile station can tolerate and taking the minimum of a radio link attenuation level to determine transmit power attenuation (see col. 8, lines 59-67 and col. 9, lines 1-5). Honkasalo does not teach determining an uplink control attenuation level for a current block, which indicates an estimated additional downlink attenuation that can be applied such that adequate uplink state performance is achieved, or a control flag. Laakso teaches determining an uplink control attenuation level for a current block which indicates an estimated additional downlink attenuation that can be applied such that adequate uplink state performance is achieved

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(see col. 20, lines 48-67 and col. 21, lines 1-6). Andersson teaches a flag that is a power control indicator (see col. 9, lines 6-10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the Honkasalo adapt to include determining an uplink control attenuation level for a current block which indicates an estimated additional downlink attenuation that can be applied such that adequate uplink state performance is achieved and a control flag because this would allow for the arrangement of transmitted data so that available data communication capacity can be maximally utilized.

Regarding claim 9 Honkasalo teaches setting uplink attenuation level to a higher attenuation level (see col. 6, lines 55-62).

Regarding claim 10 Honkasalo teaches an attenuation level that is determined in accordance with an optimal radio link attenuation level and an effective attenuation level (see col. 6, lines 50-65).

Regarding claim 11 Honkasalo teaches a device as recited in claim 10 except for an equation as specifically recited in claim 11. Honkasalo does teach an effective attenuation level that is determined in accordance with an equation (see col. 6, lines 50-60 and col. 7, lines 20-26). Even though Honkasalo does not teach an equation as specifically recited in claim 11 it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the Honkasalo adapt to include an equation as specifically recited in claim 11 because this would allow for various methods to be used for obtaining a desired attenuation level.

Regarding claim 12 Honkasalo teaches caching, at a downlink for a mobile station, the radio link attenuation level (see col. 6, lines 55-60). Honkasalo teaches updating a mobile station of changes in transmission power according to a time that has passed from transmission of a

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previous packet (see col. 3, lines 65-67 and col. 4, lines 1-10). Honkasalo teaches retrieving cached information (see col. 8, lines 28-34) and adjusting a cached radio link attenuation level to account for an elapsed time (see col. 6, lines 54-58 and col. 8, lines 48-67). Honkasalo teaches setting the radio link attenuation level for a next transmission in accordance with a cached radio link attenuation level (see col. 6, lines 50-62).

Regarding claim 13 Honkasalo, Laakso, and Andersson teach a device as recited in claim 9 except for incrementing an uplink control flag attenuation level if, in a specified number of blocks, there have been no new uplink TBF's and no USF flag errors and no changes in uplink control flag attenuation. Honkasalo does teach incrementing an uplink control attenuation level in a specified number of blocks (see col. 6, lines 55-63). Andersson does teach a flag that is a power control indicator (see col. 9, lines 6-10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the Honkasalo, Laakso, and Andersson adapt to include incrementing an uplink control flag attenuation level if, in a specified number of blocks, there have been no new uplink TBF's and no USF flag errors and no changes in uplink control flag attenuation because this would allow dynamic control of a desired attenuation level.

Regarding claim 14 Honkasalo teaches determining a radio link attenuation level for a data block (see col. 6, lines 52-58). Honkasalo teaches achieving an acceptable error rate (see col. 9, lines 31-34 and col. 11, lines 35-42). Honkasalo teaches determining the transmit power attenuation level for a current block in accordance with a radio link attenuation level (see col. 6, lines 48-62 and col. 8, lines 36-67). Honkasalo teaches a radio link attenuation level that is the

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downlink attenuation that the mobile station can tolerate (see col. 8, lines 59-67 and col. 9, lines 1-5).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hagerman U.S. Patent 6,539,010 discloses a downlink power control and adaptive beamforming for half-rate radio communication systems.

Tsunehara U.S. Patent 6,307,844 discloses a CDMA communication system and its transmission power control method.

Esmailzadeh, U.S. Patent 6,43,296 discloses power control in a cdma mobile communications system.

Mazur, U.S. Patent 6,072,792 discloses a power control apparatus, and an associated method, for TDMA transmitter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon J Miller whose telephone number is 703-305-4222. The examiner can normally be reached on Mon.-Fri. 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 703-308-5318. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

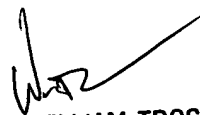
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

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April 5, 2003



WILLIAM TROST
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600